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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/825,896 | 04/16/2004 | Kazuo Sekiya | JP920030043US1 | 8970 |
| 36380 | 7590 | 12/14/2004 | EXAMINER | |
| RICHARD M. GOLDMAN 371 ELAN VILLAGE LANE SUITE 208, CA 95134 | | | LEPISTO, RYAN A | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2883 | |

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,896

Applicant(s)

SEKIYA ET AL.

Examiner

Ryan Lepisto

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2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 7-11, 16-18 and 21 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-15 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 19-20 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-21 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/04.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C.

121:

- I. Claims 1-6, 12-15 and 20, drawn to an information processor and the link module and prism used in the information processor, classified in class 385, subclass 33.
- II. Claims 7-11 and 16-18, drawn to a signal transfer method and optical interconnection method, classified in class 359, subclass 638.
- III. Claim 21, drawn to a method of manufacturing a prism, classified in class 65, subclass 39.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for using the product, in this case transferring a signal, can be practiced with another materially different product, for example instead of using a prism or optical bend to deflect light, spherical lenses, diffraction gratings or optical cavities can be used to deflect light.

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3. Inventions I and III are related as process of making and product made.

The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product, the prism, can be made by another and materially different process, for example by extruding glass and cutting the extrusion to the proper length.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II and the search required for Group I is not required for Group III and the search required for Group II is not required for Group III, restriction for examination purposes as indicated is proper.

6. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

7. During a telephone conversation with Richard Goldman on 18 November 2004 a provisional election was made without traverse to prosecute the invention of group I, claims 1-6, 12-15 and 19-20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7-11, 16-18 and 21 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

9. Figure 14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Figure 14 is not an embodiment of the applicant's invention, instead it is stated as being a prism that the applicant's prism performs better than.

10. Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

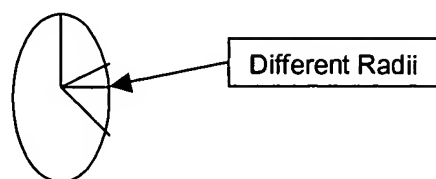
Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. **Claims 1-2 and 5-6** are rejected under 35 U.S.C. 102(b) as being anticipated by **Li et al (US 6,400,855 B1)** (Li). Li teaches an optical switch (Fig. 7-8) module for connecting light beams by deflection comprising input light emitting devices (804-807) arranged in a plane, output optical waveguides (814-817) for receiving light beams from the input light emitting devices (804-807) that are arranged to intersect each other, and an optical bend section (808-811 with 812 and 813) that is disposed between the input light emitting devices (804-807) and the output optical waveguides (814-817) and includes a plurality of aspherical concave lenses (column 10 lines 35-36) (808-811 or prism 702 & lens 703), each lens (808-811) having different radii with respect to the center of the lenses to the surface of the lenses (see figure below) and that lie outward from the surface of the optical turn section (703 or 808-811 with 812 and 813) formed in accordance with the number of input light emitting devices (804-807) and output waveguides (814-817), in this case four.



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12. **Claim 19** is rejected under 35 U.S.C. 102(b) as being anticipated by **Ju et al (US 6,034,797)** (Ju). Ju teaches a prism-type lens (Fig. 6A) used in a module linking optical signals comprising two optical surfaces (surfaces comprising 62 and 64) through which light beams pass (shown in Fig. 7) and aspherical lenses (62 and 64) with different radii as described and shown above in accordance with the above figure, formed on the aforementioned surfaces.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. **Claims 3 and 4** rejected under 35 U.S.C. 103(a) as being unpatentable over Li.

Li teaches an optical switch (Fig. 8) module for connecting light beams by deflection comprising input light emitting devices (804-807) arranged in a plane, output optical waveguides (814-817) for receiving light beams from the input light emitting devices (804-807) and an optical bend section (808-811 with 812 and 813) that is disposed between the input light emitting devices (804-807) and the output optical waveguides (814-817) and includes a plurality of aspherical lenses (808-811) formed in accordance with the number of input light emitting devices (804-807) and output waveguides (814-817), in this case four.

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Li does not teach expressly the input light emitting devices being either laser diodes or light emitting diodes (LEDs) or the output optical waveguides being optical fibers.

At the time the invention was made, it would be obvious to a person of ordinary skill in the art to substitute an input source for a laser diodes or LEDs and to substitute an optical fiber for a waveguide or vice versa. Applicant has not disclosed that using a laser diodes or LEDs as input sources or an optical fiber versus an optical waveguide provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with the input sources and waveguides as taught by Li because light will be inputted to the bend and then will exit via the optical waveguides the same as it would with laser diodes or LEDs and optical fibers.

Therefore, it would have been obvious to one of ordinary skill in this art to modify Li to obtain the invention as specified in claim 3 and 4.

The motivation would have been to provide an optical input to the bend and provide a way for the optical input to exit the system.

Allowable Subject Matter

14. **Claims 12-15** are allowed. The following is a statement of reasons for the indication of allowable subject matter: These claims are allowable over the prior art of record because the latter, either alone or in combination, does not disclose nor render obvious an information processor comprising a processing unit,

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memory and I/O unit comprising a driver, source elements driven by the driver, an optical turn with aspherical lenses formed in accordance with the light beams and a coupling member to couple light to optical waveguides, in combination with the rest of the claimed limitations.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Ju et al (US 6,137,637) is related to the Ju reference used above.
- Takushima et al (US 2003/0228108 A1) and (US 6,810,170 B2) teaches an optical signal processor consisting of a source, prisms and output waveguides, but the prisms do not contain aspherical surfaces and there is a single source.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Lepisto whose telephone number is (571) 272-1946. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ryan Lepisto

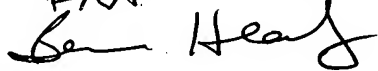
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Date: 11/28/04

Frank Font

Supervisory Patent Examiner

Technology Center 2800

Signing for
FRANK FONT

Brian Healy
Primary Examiner